

APPENDIX I

SPSS COMMANDS USED TO CREATE CONSTRUCTED VARIABLES

SPSS Commands Used to Create Constructed Variables

* COMPUTED VARIABLES

* The following commands reflect the construction of scales,
* indices, and other summary variables from the SCITEK99 data set.

* The following commands create selected background variables of
* gender, race, education, and age.

```
compute raceth = q179.  
recode  
raceth (sysmis = 9).  
value labels raceth 1 "African Amer" 2 "Hispanic Amer" 3 "Other Amer".  
if (raceth eq 9) raceth = q179b.  
variable labels raceth "RACE-ETHNICITY".  
  
compute rage = 1999-q181.  
if (q181 eq -2) rage = -9.  
if (q181 eq -1) rage = -9.  
variable labels RAGE "RESPONDENT AGE".  
  
compute respage5 = rage.  
recode respage5 (18 thru 24 = 1) (25 thru 34 = 2) (35 thru 44 = 3)  
(45 thru 64 = 4) (65 thru 99=5).  
value labels respage5 1 "18 thru 24" 2 "25 thru 34" 3 "35 thru 44"  
4 "45 thru 64" 5 "65 or older".  
if (rage eq -9) respage5 = q181b.  
variable labels RESPAGE5 "RESPONDENTS' AGE-5 CATEGORIES".  
  
compute reduc3 = q150.  
recode reduc3 (1,2,3=1) (4,5,6=2) (7,8,9,10=3) (-1=-9).  
value labels reduc3 1 "Less than H.S." 2 "High school graduate"  
3 "Baccalaureate".  
variable labels REDUC3 'RESPONDENT EDUCATION - 3 CATEGORIES'.  
  
compute reduc4 = q150.  
recode reduc4 (1,2,3=1) (4,5,6=2) (7=3) (8,9,10=4) (-1=-9).  
value labels reduc4 1 "Less than H.S." 2 "High school graduate"  
3 "Baccalaureate" 4 "Graduate degree".  
variable labels REDUC4 "RESPONDENT EDUCATION - 4 CATEGORIES".
```

* The following commands create measures of persistence in use of news
* magazines and newspapers (NPERSIST) and persistence in use of news
* magazines, science magazines, newspapers (PERSIST), and health related
* magazines (HPERSIST).

* PERSIST is a measure of the regular acquisition of information
* concerning news and current events. PERSIST2 is a dichotomous
* variable to distinguish between those individuals without regular
* information acquisition habits and those individuals who are regular
* information consumers.

```

count persist = q30 (1) q31 q32 q33 q34 q35 (11,12,13, 50 thru 59).

compute persist2=persist.
recode persist2 (1 thru hi=1).
count npersist=q30(1) q31 q32 q33 q34 q35 (11,12,13).
count hpersist=q30(1) q31 q32 q33 q34 q35
(30 thru 39,50 thru 59,11,12,13,26,89,90).
recode npersist persist hpersist (1 thru hi = 1).
variable labels persist "Persistence to Science and News Events"
persist2 "Persistence to Science and News Events"
npersist "Persistence to News Events"
hpersist "Persistence to Health News".

*
* The following commands create measures of attentiveness to a number
* of policy issues. These attentiveness measures include components
* of interest and information about the issue, as well as persistence
* to the news.
*

compute apfp=3.
if (q8 eq 1) apfp=2.
if ((q8 eq 1) and (q19 eq 1) and (npersist ge 1)) apfp=1.

compute apls=3.
if (q10 eq 1) apls=2.
if ((q10 eq 1) and (q21eq1))apls=1.

compute apsc=3.
if (q11 eq 1) apsc=2.
if ((q11 eq 1) and (q22 eq 1) and (persist ge 1)) apsc=1.

compute apec=3.
if (q12 eq 1) apec=2.
if ((q12 eq 1) and (q23 eq 1) and (npersist ge 1)) apec=1.

compute apnt=3.
if (q13 eq 1) apnt=2.
if ((q13 eq 1) and (q24 eq 1) and (persist ge 1)) apnt=1.

compute apnp=3.
if (q14 eq 1) apnp=2.
if ((q14 eq 1) and (q25 eq 1) and (persist ge 1)) apnp=1.

compute apmd=3.
if (q15 eq 1) apmd=2.
if ((q15 eq 1) and (q26eq1) and (hpersist ge 1)) apmd=1.

compute apsp=3.
if (q16 eq 1) apsp=2.
if ((q16 eq 1) and ( q27 eq 1) and (persist ge 1)) apsp=1.

compute apev=3.
if (q17 eq 1) apev=2.
if ((q17 eq 1) and (q28 eq 1) and (persist ge 1)) apev=1.

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compute apdf=3.
if (q18 eq 1) apdf=2.
if ((q18 eq 1) and (q29 eq 1) and (npersist ge 1)) apdf=1.

compute apst=3.
if ((apsc eq 2) or (apnt eq 2)) apst=2.
if ((apsc eq 1) or (apnt eq 1)) apst=1.

compute apag = 3.
if (q9 eq 1) apag = 2.
if ((q9 eq 1) and (q20 eq 1) and (npersist ge 1)) apag = 1.

variable labels
    apfp "Attentive Public Foreign Policy"
    apls "Attentive Public Local Schools"
    apsc "Attentive Public Science"
    apec "Attentive Public Economics"
    apnt "Attentive Public New Technologies"
    apnp "Attentive Public Nuclear Power"
    apmd "Attentive Public Medicine"
    apsp "Attentive Public Space"
    apev "Attentive Public Environment"
    apdf "Attentive Public Defense"
    apst "Attentive Public Science & Technology"
    apag "Attentive Public Agriculture".

value labels apfp apls apsc apec apnt apnp apmd apsp apev apdf
    apst apag 1 'Attentive' 2 'Interested' 3 'Residual'.

```

* The following commands create the indices of interest and informedness in selected public policy issues.

```

compute fpinix = q8.
compute aginix = q9.
compute lsinix = q10.
compute scinix = q11.
compute ecinix = q12.
compute ntinix = q13.
compute npinix = q14.
compute mdinix = q15.
compute spinix = q16.
compute evinix = q17.
compute dfinix = q18.

recode fpinix aginix lsinix scinix ecinix ntinix npinix mdinix spinix
    evinix dfinix (1=100) (2=50) (else= 0).

variable labels fpinix "Index of Interest in Foreign Policy" /
    aginix "Index of Interest in Agriculture" /
    lsinix "Index of Interest in Local Schools" /
    scinix "Index of Interest in Scientific discoveries" /
    ecinix "Index of Interest in Economic Issues" /
    ntinix "Index of Interest in New Technologies" /
    npinix "Index of Interest in Nuclear Power" /
    mdinix "Index of Interest in New Medical Discoveries" /

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        spinix "Index of Interest in Space Exploration" /
        evinix "Index of Interest in the Environment" /
        dfinix "Index of Interest in Military and Defense".

value labels fpinix aginix lsinix scinix ntinix npinix mdinix
      pinix evinix dfinix 100 "Very Interested" 50 "Moderately
Interested" 0 "Not Interested".

weight by wt5.

compute fpifix = q19.
compute agifix = q20.
compute lsifix = q21.
compute scifix = q22.
compute ecifix = q23.
compute ntifix = q24.
compute npifix = q25.
compute mdifix = q26.
compute spifix = q27.
compute evifix = q28.
compute dfifix = q29.

recode fpifix agifix lsifix scifix ecifix ntifix npifix mdifix spifix
      evifix dfifix (1=100) (2=50) (else= 0).

variable labels fpifix "Index of Informedness about Foreign Policy" /
      agifix "Index of Informedness about Agriculture" /
      lsifix "Index of Informedness about Local Schools" /
      scifix "Index of Informedness about Scientific discoveries" /
      ecifix "Index of Informedness about Economic Issues" /
      ntifix "Index of Informedness about New Technologies" /
      npifix "Index of Informedness about Nuclear Power" /
      mdifix "Index of Informedness about New Medical Discoveries" /
      spifix "Index of Informedness about Space Exploration" /
      evifix "Index of Informedness about the Environment" /
      dfifix "Index of Informedness about Military and Defense".

value labels fpifix agifix lsifix scifix ecifix ntifix npifix mdifix
      spifix evifix dfifix 100 "Very well informed" 50 "Moderately well
informed" 0 "Poorly informed".

*
* The following commands creates the traditional measure of atoss
* (attitude toward organized science and society.

count atoss=q82 (1,2) q98 (1) q91 q85 (3,4).

*
* The following commands create combined risk-benefit items for a
* variety of science and technology issues.
*

compute rbsci = q98.
recode rbsci (9=sysmis).
recode rbsci (1=2) (2=3) (3=4) (7,8=3).

```

```

if (q99 eq 1) rbsci = 1.
if (q100 eq 1) rbsci = 5.
variable labels rbsci "R-B Assessment of Science".
value labels rbsci 1 "B>>R"
                2 "B>R"
                3 "R=B"
                4 "R>B"
                5 "R>>B".

compute cbinspace = q107.
recode cbinspace (9=sysmis).
recode cbinspace (1=2) (2=3) (3=4) (7,8=3).
if (q108 eq 1) cbinspace = 1.
if (q109 eq 1) cbinspace = 5.
variable labels cbinspace "C-B Assessment of Space".
value labels cbinspace 5 "C>>B"
                4 "C>B"
                3 "C=B"
                2 "B>C"
                1 "B>>C".

compute rbdna = q101.
recode rbdna (1=2) (2=3) (3=4) (7,8=3).
if (q102 eq 1) rbdna = 1.
if (q103 eq 1) rbdna = 5.
variable labels rbdna "R-B Assessment of genetic engineering".
value labels rbdna 5 "R>>B"
                4 "R>B"
                3 "R=B"
                2 "B>R"
                1 "B>>R".

compute rbnucp = q104.
recode rbnucp (9=sysmis).
recode rbnucp (1=2) (2=3) (3=4) (7,8=3).
if (q105 eq 1) rbnucp = 1.
if (q106 eq 1) rbnucp = 5.
variable labels rbnucp "R-B Assessment of nuclear power".
value labels rbnucp 5 "R>>B"
                4 "R>B"
                3 "R=B"
                2 "B>R"
                1 "B>>R".

*
* The following commands construct a set of variables to measure the
* extent of formal training in science and mathematics for each
* respondent.
*

compute q153r = q153.
recode q153r (1=0) (2=1) (3=2) (4=3) (5=4) (6=5) (7=6) (8=7) (9=8)
(10=9) (11=99) (97,98,99=99).

value labels q153r 0 "No math in HS;didn't"
                1 "General math/bus/voc"

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```

2 "Pre-algebra"
3 "One year of algebra"
4 "Two years of algebra"
5 "Geometry (plane/solid)"
6 "Trib/linear progr/an"
7 "Pre-calculus"
8 "Calculus"
9 "Statistics/probab"
90 "Uncodable"
99 "Don't Know".

compute hsmath=q153r.
recode hsmath (90,99,sysmis,10=0)(1,2=0)(3=1)(5=2)(4=3)(6,7,9=4)(8=5).
variable labels hsmath 'HS Math'.

compute hsmath3=q153r.
recode hsmath3 (99,90,sysmis,10=1)(0,1,2=1)(3,4,5=2)(6 thru 9=3).
variable labels hsmath3 "High School Math - 3 Levels".
value labels hsmath3 1 'Low Math' 2 'Alg-Geom' 3 'High Math'.

count hssci= q155 q156 q157 (1).
variable labels hssci "Number Courses HS Science".

compute collsci=q152.
recode collsci (997,998,999,sysmis=0)(10 thru 900=10).
variable labels collsci "Number Courses College Science".
freq vars = collsci.

compute collsci3=collsci.
recode collsci3 (1,2,3=1)(4 thru 10=2).
value labels collsci3 0 'None' 1 '1-3 Courses' 2 '4+ Courses'.
variable labels collsci3 "College Science 3 Categories".
freq vars = collsci3.

compute smeduc=hsmath+hssci+collsci.
variable labels smeduc 'Index of Formal Educ in Sci and Math'.
freq vars = smeduc.

compute smeduc3=smeduc.
recode smeduc3 (0 thru 4=1)(5 thru 8=2) 9 thru 18=3).
value labels smeduc3 1 'Low' 2 'Middle' 3 'High'.
variable labels smeduc3 'Formal Educ Sc /Math - 3 Categories'.

```

* The following commands construct a set of variables to measure
* media use. Some of the measures are grouped and are used to estimate
* the percentage of respondents above a threshold. Other measures are
* designed to provide a use per day, month, or year.

```

* Print media (general and science)
*

compute newspap=q30.
recode newspap (4,8,9=3).
value labels newspap 1 'Every day' 2 'Sometimes' 3 'Rarely or never'.

compute newspapr=newspap.
recode newspapr (1=360) (2=100) (3=12).
var labels newspapr 'Number of newspapers read per year'.

count newsmag = q31 q32 q33 q34 q35 (10 thru 19).
recode newsmag (1 thru 5=1).
variable labels newsmag 'Newsmagazine Readership'.
value labels newsmag 0 "Doesn't Read"
           1 "Reads".

count newsmagr=q31 q32 q33 q34 q35 (10 thru 19).
compute numnewmg=newsmagr*50.
var labels numnewmg 'Number of news magazines read per year'.

count scimagr=q31,q32,q33,q34,q35,q36,q37,q38 (50 thru 59).
compute scimag=0.
if (scimagr ge 1) scimag=1.
var labels scimag 'Readership of a science magazine'.
value labels scimag 0 'Reads none' 1 'Reads 1 or more'.
var labels scimagr 'Number of science magazines read regularly'.
var labels scimag 'Science magazine readers'.

compute scimagr =scimagr.
recode scimagr (1 thru hi = 1).

compute numscmag=scimagr*11.
var labels numscmag 'Number of science magazines read per year'.

*
* Television viewing (including science television)
*

compute numtvhrs=q39.
compute numtvnew=q40.
recode numtvhrs numtvnew (sysmis=0) (.08=.17) (12 thru 25=12) (98,99=0).

compute tvnewl = q40.
recode tvnewl (1 thru 12 = 1) (else=0).

compute numtvhrs=numtvhrs*350.
compute numtvnew=numtvnew*350.
var labels numtvhrs 'Total hours of TV viewing per year'.
var labels numtvnew 'Hours of TV news viewed per year'.

missing values q44 q47 q50 (97,999).

```

```

count scitv=q44 q47 q50 (1 thru 60).
var label scitv 'Number of science TV shows viewed at least once a
month'.

compute scitvl = scitv.
recode scitvl (1 thru hi = 1).

compute q45r=q45.
compute q48r=q48.
compute q51r=q51.
recode q45r q48r q51r (50 thru 96=50) (97,98,99=0) (sysmis=0).
compute numscitv=q45r+q48r+q51r.
compute numscitv=numscitv*11.
var labels numscitv 'Number of science TV shows viewed per year'.

*
* Radio listening (total and news)
*

compute radionew = q53.
recode radionew (sysmis=0) (.08 thru .75=1) (1.0 thru 1.99 = 2)
(2.0 thru 25=3).
variable labels radionew "Radio News Usage".
value labels radionew 0 "Doesn't Listen" 1 "Less than 1 hr/day"
2 "1-2 hrs/day" 3 "2 or more hrs/day".
var labels radionew 'Hours per day of radio news listening'.

compute numrdhrs=q52.
compute numrdnew=q53.
recode numrdhrs numrdnew (98 thru 99=0)(.08=.17) (sysmis=0)
(12 thru 25=12).

compute radnewl = q53.
recode radnewl (1 thru 24 = 1) (else=0).

compute numrdhrs=numrdhrs*350.
compute numrdnew=numrdnew*350.
var labels numrdhrs 'Total hours of radio listening per year'.
var labels numrdnew 'Hours of radio news listening per year'.

compute radionew = q53.
recode radionew (1 thru 20 = 1) (else=0).

*
* Public library use
*

compute plib4=q58a.
recode plib4 (1 thru 4=1)(5 thru 12=2)(13 thru 98=3)(99=0).
value labels plib4 0 'None' 1 '1-4 visits' 2 '5-12 visits'
3 '13+ visits'.

```

```

compute plibl = q58a.
recode plibl (1 thru 367=1)(else=0) numplbks numplbks numscmag numsmv
      numtvhrs numtvnew numscity.
compute plib5 = q58a.
recode plib5 (5 thru 367=1)(else=0).

compute q58r=q58a.
recode q58r (998=0)(40 thru 900=40).
compute numplvst=q58r.
var labels numplvst 'Number of public library visits per year'.

compute q58cr=q58c.
recode q58cr (9998,9999=0)(sysmis=0)(100 thru 9000=100).
compute numplbks=q58cr.
var labels numplbks 'Number of public library books borrowed per year'.

compute q58er=q58e.
recode q58er (sysmis=0) (9998,9999=0) (50 thru 9000=50).

compute numplvts=q58er.
var labels numplvts 'Number of PL video tapes borrowed per year'.

*
* Museum use (science and other
*
*
* The following commands create SCIMUS (science museum visits) which is
* a combination of visits to science museums, zoos/aquariums, and
* natural history museums. Each of the three individual items is
* recoded so that the respondent receives a 0 (0 visits) 1 (1 visit) or
* 2 (2 or more visits). The three items are then combined to create
* SCIMUS which ranges from 0 to 6. SCIMUS3 is a collapsed version of
* scimus, in which 0 represents 0 visits, 1 represents 1 visit, and 2
* represents 2 or more visits to the 3 types of combined science
* museums.
*

count scimus = q55 q56 q57 (1 thru 90).
recode scimus (1 thru hi = 1) (else=0).

compute scimus4=scimus.
recode scimus4 (0=0)(1,2=1)(3,4=2)(5,6=3).
value lables scimus4 0 'None' 1 '1-2' 2 '3-4' 3 '5+'.

compute q55r=q55.
compute q56r=q56.
compute q57r=q57.
recode q55r q56r q57r (997=0)(20 thru 97=20).
compute numsmv=q55r+q56r+q57r.
var labels numsmv 'Number of science museum visits per year'.

compute vartmus3=q65.
compute vstmus3=q69.
compute vnhmus3=q66.
compute vzooaq3=q67.

```

```

recode vartmus3 vstmus3 vnwmus3 vzooaq3 (1 thru 4=1)
      (5 thru 98=2) (99=0).
value labels vartmus3 vstmus3 vnwmus3 vzooaq3 1 '1-4 visits'
      2 '5 or more'.

*
* Computer use at work and at home (including equipment and use)

count compacc=q164 (1) q166a (1).
var labels compacc 'Access to a computer'.
value labels compacc 0 'No access' 1 'Work or home' 2 'Work and home'.

compute compacc4 = -9.
value labels compacc4 0 "No access" 1 "Home not work" 2 "Work not home"
      3 "Work and home".
if (compacc eq 0) compacc4 = 0.
if (q164 eq 1) compacc4 = 2.
if (q166a eq 1) compacc4 = 1.
if ((q164 eq 1) and (q166a eq 1)) compacc4 = 3.

compute compeith = compacc.
recode compeith (1,2=1).
value labels compeith 0 "No access" 1 "Home, work, or both".
var labels compeith "Access to a computer".

count hemail = q174b q174c (1).
recode hemail (1,2=1) (else=0).
value labels hemail 0 "No" 1 "Yes".
var labels hemail "Home e-mail".

compute q165ar=q165a.
recode q165ar (sysmis=0) (998,999=0) (60 thru 100=60).
compute workhrs=q165ar*50.
var labels workhrs 'Work computer hours per year'.

compute q167r=q167.
recode q167r (sysmis=0) (997,998,999=0) (60 thru 200=60).
compute homechrs=q167r*50.
var labels homechrs 'Home computer hours per year'.
recode homechrs (900 thru hi=900).

compute q174ar=q174a.
recode q174ar (sysmis=0) (997,998,999=0) (60 thru 700=60).
compute olhrsh=q174ar*11.
var labels olhrsh 'Home hours online per year'.

compute webhrsh=q175b.
recode webhrsh (sysmis=0) (997,998,999=0) (60 thru 300=60).
compute webhrsh=webhrsh*11.

compute webhrsw=q165d.
recode webhrsw (sysmis=0) (997,998,999=0) (60 thru 300=60).
compute webhrsw=webhrsw*11.

```

```

compute olhrs = olhrsh + webhrsw.

compute webhrs=webhrsh+webhrsw.

compute webhrs3=webhrs.
compute webhrsh3=webhrsh.
compute webhrsw3=webhrsw.
recode webhrs3 webhrsh3 webhrsw3 (0=0) (1 thru 110=1)(112 thru hi=2).
value labels webhrs3 webhrsh3 webhrsw3 0 'None' 1 '1-110 hrs'
      2 '120+ hrs'.

compute online2=onlinehr.
recode online2 (0=0)(else=1).

compute compacc2=compacc.
recode compacc2 (2=1).
value labels compacc2 1 'Access' 0 'None'.

count homecmp=q166a(1).
value labels homecmp 1'Has home computer' 0 'Not'.

if (q166b eq 2) q166c=1.
if (q166a eq 2) q166c=0.
if (q166a eq 7) q166c=0.
compute ncomp=q166c.
recode ncomp (0=0)(1=1)(2=2)(3=3)(4,5,6=4).
value labels ncomp 0 'None' 1 'One' 2 'Two' 3 'Three' 4 'Four or more'.

count email=q165b q174b q174c (1).
compute email2=email.
recode email2 (2=1).

count webhlth=q175dv q175ev q175fv q175gv (10 thru 13).
count websci=q175dv q175ev q175fv q175gv (20 thru 28).
count webnews=q175dv q175ev q175fv q175gv (30).
count weboth=q175dv q175ev q175fv q175gv (40 thru 98).

count webhsci2=websci webhlth (1 thru hi).
recode webhsci2 (2=1).

count webacch=q175a q174d (1).
recode webacch (2=1).
count webaccw=q165c (1).
count webacc=webacch webaccw (1).
value labels webacc 0 'No access' 1 'Home or work' 2 'Home and work'.

compute webacc4=0.
if ((webacc eq 1) and (webacch eq 1)) webacc4=1.
if ((webacc eq 1) and (webaccw eq 1)) webacc4=2.
if (webacc eq 2) webacc4=3.
value labels webacc4 0 'No access' 1 'Home only' 2 'Work only'
      3 'Home + work'.

compute webacc2=webacc.
recode webacc2 (2=1).

```

```

value labels webacc2 0 'No access' 1 'Access'.

***  

* The following commands create a measure of an understanding of  

* scientific process.

count undprob = q136 (2) q137 (2) q138 (1) q139 (2).  

recode undprob (4=1)(else=0).

compute undexp = q80.  

recode undexp (1,2,5=1)(else=0).

compute d3 = 0.  

if (q62 eq 1) d3 = 1.  

if (undexp eq 1) d3 = 1.  

if (undprob eq 0) d3 = 0.

*****  

***** The following commands construct measures of index of scientific  

* promise and reservation. The data are written out as text, and then  

* confirmatory factor analysis is run using lisrel8. The resulting  

* factor loadings are used to create the indices.

recode q82 q92 q94 q95 q85 q88 q91 (1=4) (2=3) (7,8,9=2) (3=1) (4=0).  

.....  

recode rbsci (1=0) (2=1) (3=2) (4=3) (5=4).  

recode q82 q92 q94 q95 q85 q88 q91 (1=4) (2=3) (7,8,9=2) (3=1) (4=0).  

descriptives vars = q82 q92 q94 q95 q85 q88 q91 rbsci / save.  

freq vars = zq82 zq92 zq94 zq95 zq85 zq88 zq91 zrbbsci.  

compute stpromx = (zq82 * .74) + (zq92 * .51) + (zq94 * .65) +  

(zq95 * .91).  

format stpromx (f8.3).  

freq vars = stpromx.  

compute stresx = (zq85 * .40) + (zq88 * .34) + (zq91 * .47)  

+ (zrbbsci * .71).  

format stresx (f8.3).  

freq vars = stresx.  

compute stprom = rnd (100 * (stpromx+9.181)/13.019).  

freq vars = stprom / stat = all.  

compute stres = rnd (100 * (stresx+2.448)/6.389).  

freq vars = stres / stat = all.  

compute stprom3 = stprom.  

compute stres3 = stres.

```

```

recode stprom3 (0 thru 49=1) (50 thru 74=2) (75 thru 100=3).
value labels stprom3 1 "0 thru 49" 2 "50 thru 74" 3 "75 thru 100".

recode stres3 (0 thru 29=1) (30 thru 54=2) (55 thru 100=3).
add value labels stres3 1 "0 thru 29" 2 "30 thru 54" 3 "55 thru 100".

**
*** The following commands count the number of times individuals looked
*** for health, scientific, and other types of information on the world
*** wide web.

count healwww = q175d q175e q175f q175g (10 thru 19).
count sciwww = q175d q175e q175f q175g (20 thru 29).
count othwww = q175d q175e q175f q175g (30 thru 95).

```

* The following commands were used to create the weight variable wt5.

```

*****
***** This program creates the weight - wt5 - for SCITEK99 for 1882 cases
** The program follows the nine steps listed below:
*
*      1. Set weight equal to the number of adults in the
*          household (WGT1).
*
*      2. Weight by WGT1 and run frequencies on any variable.
*
*      3. Calculate a deflator so that N=1882:
*
*                      original frequencies
*          DEFULATOR = _____
*                      WGT1 frequencies
*
*      4. Set WGT2 = (WGT1 * DEFULATOR)
*
*
*      5. Calculate sample share for each of 90 cells of the
*          matrix of (age-race-gender) using WGT2.
*
*      6. For each of the 60 cells (using IF statements),
*          calculate an adjustment (ADJ) based on the following
*          formula:
*
*                      Universe proportion
*
*                      _____
*                      Sample proportion (calculated in step 5)
*
```

```
*  
* The universe proportion is based on data contained in  
* the following publication:  
*  
* U.S. Bureau of the Census, Current Population Reports,  
* Series P-20, No. 462, Educational Attainment in  
* the United States: March 1991 and 1990, U.S.  
* Government Printing Office, Washington, D.C.,  
* 1992.  
*  
*  
* 7. Compute WT3 = WGT2 * ADJ.  
*  
* 8. Create an inflator (original frequencies / WT3  
* frequencies) so that the final N will equal 1882.  
*  
* 9. COMPUTE WT5 = WT3 * inflat.  
*****  
***.  
*****  
***
```

```
*****  
***  
*wgt1 is the original sample weighted by the number of adults in the  
*household, and is dropped from the system file when wt5 is created.  
*****.
```

```
compute wgt1 = nadults.
```

```
*original frequencies (1882) divided by frequencies when weighted  
*by wgt1 (3619) = the deflator of .520033158. This number will be used  
* to calculate wgt2 (wgt2 is dropped from the file once wt5 is created).
```

```
compute wgt2 = (wgt1 * .520033158).
```

```
weight by wgt2.
```

```
*****  
* In the next step, the file was weighted by wgt2, and crosstabs were  
* run to produce the sample proportion of each of 90 cells.  
*****  
*  
*  
*  
*.  
*****
```

```
*****  
*  
*****.  
*The following commands create an adjustment variable (ADJ) that is  
* based on the 90 cell table for race/gender/age/reduc3.
```

```

compute adj = 0.

***** african american male*****.
***** african american male*****.

if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 1)) adj = 3.50.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 2)) adj = 3.50.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 3)) adj = 3.50.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 4)) adj = 3.50.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 5)) adj = 3.50.

if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 1)) adj = 1.132.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 2)) adj = 2.622.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 3)) adj = .861.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 4)) adj = .711.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 5)) adj = .711.

if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 1)) adj = .613.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 2)) adj = .613.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 3)) adj = .613.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 4)) adj = .613.
if ((raceth eq 1) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 5)) adj = .613.

***** african american female***.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 1)) adj = 1.793.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 2)) adj = 1.793.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 3)) adj = 1.793.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 4)) adj = 1.793.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 5)) adj = 1.793.

if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 1)) adj = .847.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 2)) adj = 1.703.

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```

if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 3)) adj = .900.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 4)) adj = .712.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 5)) adj = .712.

if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 1)) adj = .604.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 2)) adj = .604.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 3)) adj = .604.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 4)) adj = .604.
if ((raceth eq 1) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 5)) adj = .604.

```

***** hispanic male *****.

```

if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 1)) adj = 1.643.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 2)) adj = 1.643.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 3)) adj = 1.643.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 4)) adj = 1.643.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 5)) adj = 1.643.

if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 1)) adj = .905.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 2)) adj = .600.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 3)) adj = .604.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 4)) adj = .604.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 2) and
    (respage5 eq 5)) adj = .604.

if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 1)) adj = .432.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 2)) adj = .432.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 3)) adj = .432.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 4)) adj = .432.
if ((raceth eq 2) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 5)) adj = .432.

```

**** hispanic female****.

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if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 1) and

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    (respage5 eq 1)) adj = 1.916.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 2)) adj = 1.916.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 3)) adj = 1.916.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 4)) adj = 1.916.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 5)) adj = 1.916.

if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 1)) adj = .368.
if ((raceth eq 2) and (gender eq 2) and reduc3 eq 2) and
    (respage5 eq 2)) adj = .558.
if ((raceth eq 2) and (gender eq 2) and reduc3 eq 2) and
    (respage5 eq 3)) adj = .372.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 4)) adj = .372.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 5)) adj = .372.

if ((raceth eq 2) and (gender eq 2) and reduc3 eq 3) and
    (respage5 eq 1)) adj = .449.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 2)) adj = .449.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 3)) adj = .449.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 4)) adj = .449.
if ((raceth eq 2) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 5)) adj = .449.

```

```

***other male ***.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 1)) adj = 1.896.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 2)) adj = 2.906.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 3)) adj = 1.434.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 4)) adj = 4.063.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 1) and
    (respage5 eq 5)) adj = 5.571.

if ((raceth eq 3) and (gender eq 1) and reduc3 eq 2) and
    (respage5 eq 1)) adj = 1.173.
if ((raceth eq 3) and (gender eq 1) and reduc3 eq 2) and
    (respage5 eq 2)) adj = 1.651.
if ((raceth eq 3) and (gender eq 1) and reduc3 eq 2) and
    (respage5 eq 3)) adj = 1.093.
if ((raceth eq 3) and (gender eq 1) and reduc3 eq 2) and
    (respage5 eq 4)) adj = .912.
if ((raceth eq 3) and (gender eq 1) and reduc3 eq 2) and
    (respage5 eq 5)) adj = .779.

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if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 1)) adj = .724.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 2)) adj = .786.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 3)) adj = .685.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 4)) adj = .504.
if ((raceth eq 3) and (gender eq 1) and (reduc3 eq 3) and
    (respage5 eq 5)) adj = .452.

```

***other female ***.

```

if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 1)) adj = 1.547.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 2)) adj = 1.952.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 3)) adj = 1.667.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 4)) adj = 2.271.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 1) and
    (respage5 eq 5)) adj = 2.122.

if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 1)) adj = 1.224.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 2)) adj = 1.672.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 3)) adj = 1.136.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 4)) adj = .780.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 2) and
    (respage5 eq 5)) adj = .895.

if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 1)) adj = 1.021.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 2)) adj = 1.042.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 3)) adj = .839.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 4)) adj = .375.
if ((raceth eq 3) and (gender eq 2) and (reduc3 eq 3) and
    (respage5 eq 5)) adj = .545.

```

Compute WT3 = (WGT2 * ADJ).

format wt3 (f8.3).

* The N when weighted by wt3 = 1881, so an inflator needs to be
* calculated. 1882 (the original frequencies) divided by

* 1881 (the wt3 frequencies) = 1.0005316.

COMPUTE WT5 = (WT3 * 1.0005316).